Danuta Kruk

List of Publications by Year
in descending order

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123	2,653	186265	223800
papers	citations	28 h-index	46 g-index

127	127	127	1611
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Relationship between macroscopic properties of honey and molecular dynamics â€“ temperature effects. Journal of Food Engineering, 2022, 314, 110782.	5.2	2
2	Diffusion in oils versus their viscosity â€“ Insight from Nuclear Magnetic Resonance relaxometry. Journal of Food Engineering, 2022, 317, 110848.	5.2	3
3	Relationship between Translational and Rotational Dynamics of Alkyltriethylammonium-Based Ionic Liquids. International Journal of Molecular Sciences, 2022, 23, 1688.	4.1	4
4	Water Dynamics in Starch Based Confectionery Products including Different Types of Sugar. Molecules, 2022, 27, 2216.	3.8	3
5	Internal Dynamics of Ionic Liquids over a Broad Temperature Rangeâ€”The Role of the Cation Structure. Materials, 2022, 15, 216.	2.9	2
6	Relative Cation-Anion Diffusion in Alkyltriethylammonium-Based Ionic Liquids. International Journal of Molecular Sciences, 2022, 23, 5994.	4.1	2
7	Exploring the water mobility in gelatin based soft candies by means of Fast Field Cycling (FFC) Nuclear Magnetic Resonance relaxometry. Journal of Food Engineering, 2021, 294, 110422.	5.2	11
8	Field-dependent NMR relaxometry for Food Science: Applications and perspectives. Trends in Food Science and Technology, 2021, 110, 513-524.	15.1	34
9	Water mobility in cheese by means of Nuclear Magnetic Resonance relaxometry. Journal of Food Engineering, 2021, 298, 110483.	5.2	10
10	Water dynamics in eggs by means of Nuclear Magnetic Resonance relaxometry. Journal of Magnetic Resonance, 2021, 327, 106976.	2.1	5
11	Correlated Dynamics in Ionic Liquids by Means of NMR Relaxometry: Butyltriethylammonium bis(Trifluoromethanesulfonyl)imide as an Example. International Journal of Molecular Sciences, 2021, 22, 9117.	4.1	6
12	Water Dynamics in Whey-Protein-Based Composite Hydrogels by Means of NMR Relaxometry. International Journal of Molecular Sciences, 2021, 22, 9672.	4.1	6
13	Use of Magic Sandwich Echo and Fast Field Cycling NMR Relaxometry on Honey Adulteration with Corn Syrup. Journal of the Science of Food and Agriculture, 2021, , .	3.5	5
14	Recent development in 1H NMR relaxometry. Annual Reports on NMR Spectroscopy, 2020, , 119-184.	1.5	9
15	Dynamics of Ionic Liquids in Confinement by Means of NMR Relaxometryâ€”EMIM-FSI in a Silica Matrix as an Example. Materials, 2020, 13, 4351.	2.9	14
16	1H spin-lattice NMR relaxation in the presence of residual dipolar interactions â€“ Dipolar relaxation enhancement. Journal of Magnetic Resonance, 2020, 318, 106783.	2.1	4
17	Towards applying NMR relaxometry as a diagnostic tool for bone and soft tissue sarcomas: a pilot study. Scientific Reports, 2020, 10, 14207.	3.3	10
18	Field-dependent paramagnetic relaxation enhancement in solutions of Ni(II): What happens above the NMR proton frequency of 1â€¯GHz?. Journal of Magnetic Resonance, 2020, 314, 106737.	2.1	4

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19	Slow dynamics of solid proteins â€“ Nuclear magnetic resonance relaxometry versus dielectric spectroscopy. Journal of Magnetic Resonance, 2020, 314, 106721.	2.1	14
20	Snâ€Based Alloys Synthesized in an Ionic Liquid at Room Temperature: Cu6Sn5as a Case Study. ChemNanoMat, 2020, 6, 639-647.	2.8	2
21	Aspects of structural order in 209Bi-containing particles for potential MRI contrast agents based on quadrupole enhanced relaxation. Molecular Physics, 2019, 117, 935-943.	1.7	2
22	1H relaxation and dynamics of triphenylbismuth in deuterated solvents. Molecular Physics, 2019, 117, 921-926.	1.7	0
23	Multi-quantum quadrupole relaxation enhancement effects in ²⁰⁹Bi compounds. Journal of Chemical Physics, 2019, 150, 184309.	3.0	8
24	Estimation of the magnitude of quadrupole relaxation enhancement in the context of magnetic resonance imaging contrast. Journal of Chemical Physics, 2019, 150, 184306.	3.0	11
25	Mechanism of Water Dynamics in Hyaluronic Dermal Fillers Revealed by Nuclear Magnetic Resonance Relaxometry. ChemPhysChem, 2019, 20, 2816-2822.	2.1	21
26	Dynamics of Solid Proteins by Means of Nuclear Magnetic Resonance Relaxometry. Biomolecules, 2019, 9, 652.	4.0	27
27	Peculiar relaxation dynamics of propylene carbonate derivatives. Journal of Chemical Physics, 2019, 150, 044504.	3.0	10
28	Dynamics of condensed matter by means of Nuclear Magnetic Resonance Relaxometry. Molecular Physics, 2019, 117, 831-831.	1.7	0
29	Quadrupole relaxation enhancement and polarisation transfer in DMSO solution of [Bi(NO₃)₃(H₂O)₃]*18-crown-6 in solid state. Molecular Physics, 2019, 117, 944-951.	1.7	1
30	¹H spinâ€“lattice relaxation in water solution of ²⁰⁹Bi counterparts of Gd³⁺contrast agents. Molecular Physics, 2019, 117, 927-934.	1.7	3
31	Predicting quadrupole relaxation enhancement peaks in proton R₁-NMRD profiles in solid Bi-aryl compounds from NQR parameters. Molecular Physics, 2019, 117, 910-920.	1.7	3
32	R 1 dispersion contrast at high field with fast field-cycling MRI. Journal of Magnetic Resonance, 2018, 290, 68-75.	2.1	14
33	Model â€“ free approach to quadrupole spin relaxation in solid ²⁰⁹Bi-aryl compounds. Physical Chemistry Chemical Physics, 2018, 20, 23414-23423.	2.8	6
34	Tuning Nuclear Quadrupole Resonance: A Novel Approach for the Design of Frequency-Selective MRI Contrast Agents. Physical Review X, 2018, 8, .	8.9	8
35	²⁰⁹Bi quadrupole relaxation enhancement in solids as a step towards new contrast mechanisms in magnetic resonance imaging. Physical Chemistry Chemical Physics, 2018, 20, 12710-12718.	2.8	25
36	Structure and dynamics of [NH₂(CH₃)₂]₃Sb₂Cl₉ by means of ¹H NMR relaxometry â€“ quadrupolar relaxation enhancement effects. Physical Chemistry Chemical Physics, 2017, 19, 11197-11205.	2.8	12

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37	Dynamics of solid alanine by means of nuclear magnetic resonance relaxometry. Journal of Chemical Physics, 2017, 146, 164501.	3.0	4
38	Verification of the authenticity of drugs by means of NMR relaxometryâ€"Viagra Â® as an example. Journal of Pharmaceutical and Biomedical Analysis, 2017, 135, 199-205.	2.8	17
39	Revealing the Charge Transport Mechanism in Polymerized Ionic Liquids: Insight from High Pressure Conductivity Studies. Chemistry of Materials, 2017, 29, 8082-8092.	6.7	32
40	Segmentation Integrating Watershed and Shape Priors Applied to Cardiac Delayed Enhancement MR Images. Irbm, 2017, 38, 224-227.	5.6	4
41	Dynamical properties of EMIM-SCN confined in a SiO₂ matrix by means of ¹H NMR relaxometry. Physical Chemistry Chemical Physics, 2017, 19, 32605-32616.	2.8	33
42	The indications of tautomeric conversion in amorphous bicalutamide drug. European Journal of Pharmaceutical Sciences, 2017, 110, 117-123.	4.0	7
43	Dynamics of Molecular Crystals by Means of ¹Hâ€...NMR Relaxometry: Dynamical Heterogeneity versus Homogenous Motion. ChemPhysChem, 2016, 17, 2329-2339.	2.1	6
44	1H NMR relaxometry and quadrupole relaxation enhancement as a sensitive probe of dynamical properties of solidsâ€"[C(NH2)3]3Bi2I9 as an example. Journal of Chemical Physics, 2016, 144, 054501.	3.0	20
45	Perspectives of Deuteron Field-Cycling NMR Relaxometry for Probing Molecular Dynamics in Soft Matter. Journal of Physical Chemistry B, 2016, 120, 7754-7766.	2.6	24
46	Dynamics of ionic liquids in bulk and in confinement by means of ¹H NMR relaxometry â€" BMIM-OcSO₄ in an SiO₂ matrix as an example. Physical Chemistry Chemical Physics, 2016, 18, 23184-23194.	2.8	38
47	Physical and Structural Characterization of Imidazolium-Based Organicâ€"Inorganic Hybrid: (C₃N₂H₅)₂[CoCl₄]. Journal of Physical Chemistry A, 2016, 120, 2014-2021.	2.5	29
48	Systematic theoretical investigation of the zero-field splitting in Gd(III) complexes: Wave function and density functional approaches. Journal of Chemical Physics, 2015, 142, 034304.	3.0	16
49	Dynamics of [C3H5N2]6[Bi4Br18] by means of 1H NMR relaxometry and quadrupole relaxation enhancement. Journal of Chemical Physics, 2015, 142, 204503.	3.0	11
50	Dynamic Properties of Glass-Formers Governed by the Frequency Dispersion of the Structural Î±-Relaxation: Examples from Prilocaine. Journal of Physical Chemistry B, 2015, 119, 12699-12707.	2.6	6
51	Determining diffusion coefficients of ionic liquids by means of field cycling nuclear magnetic resonance relaxometry. Journal of Chemical Physics, 2014, 140, 244509.	3.0	75
52	Dynamics of Ferroelectric Bis(imidazolium) Pentachloroantimonate(III) by Means of Nuclear Magnetic Resonance ¹H Relaxometry and Dielectric Spectroscopy. Journal of Physical Chemistry A, 2014, 118, 3564-3571.	2.5	20
53	1H relaxation enhancement induced by nanoparticles in solutions: Influence of magnetic properties and diffusion. Journal of Chemical Physics, 2014, 140, 174504.	3.0	19
54	Solid state Field-Cycling NMR relaxometry: Instrumental improvements and new applications. Progress in Nuclear Magnetic Resonance Spectroscopy, 2014, 82, 39-69.	7.5	96

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55	Iso-Frictional Mass Dependence of Diffusion of Polymer Melts Revealed by ¹H NMR Relaxometry. Macromolecules, 2013, 46, 5538-5548.	4.8	34
56	Intermolecular Spin Relaxation and Translation Diffusion in Liquids and Polymer Melts: Insight from Fieldâ€Cycling ¹H NMR Relaxometry. ChemPhysChem, 2013, 14, 3071-3081.	2.1	59
57	Long-Time Diffusion in Polymer Melts Revealed by ¹H NMR Relaxometry. ACS Macro Letters, 2013, 2, 96-99.	4.8	19
58	Dynamics and ferroelectric phase transition of (C3N2H5)5Bi2Br11 by means of ac calorimetry and 1H NMR relaxometry. Chemical Physics, 2013, 410, 19-24.	1.9	21
59	Inter- and Intramolecular Relaxation in Molecular Liquids by Field Cycling 1H NMR Relaxometry. Applied Magnetic Resonance, 2013, 44, 153-168.	1.2	43
60	Evolution of the dynamic susceptibility in molecular glass formers: Results from light scattering, dielectric spectroscopy, and NMR. Journal of Chemical Physics, 2013, 138, 12A510.	3.0	72
61	Zero-field splitting in nickel(II) complexes: A comparison of DFT and multi-configurational wavefunction calculations. Journal of Chemical Physics, 2013, 138, 064304.	3.0	59
62	Translational diffusion in paramagnetic liquids by 1H NMR relaxometry: Nitroxide radicals in solution. Journal of Chemical Physics, 2013, 138, 024506.	3.0	9
63	Primary and secondary relaxation process in plastically crystalline cyanocyclohexane studied by 2H nuclear magnetic resonance. II. Quantitative analysis. Journal of Chemical Physics, 2013, 138, 074504.	3.0	12
64	1H relaxation dispersion in solutions of nitroxide radicals: Influence of electron spin relaxation. Journal of Chemical Physics, 2013, 138, 124506.	3.0	7
65	ESR lineshape and 1H spin-lattice relaxation dispersion in propylene glycol solutions of nitroxide radicals â€“ Joint analysis. Journal of Chemical Physics, 2013, 139, 244502.	3.0	5
66	Sensitivity of 2H NMR spectroscopy to motional models: Proteins and highly viscous liquids as examples. Journal of Chemical Physics, 2012, 136, 244509.	3.0	2
67	NMR Studies of Solid-State Dynamics. Annual Reports on NMR Spectroscopy, 2012, , 67-138.	1.5	13
68	Glassy, Rouse, and Entanglement Dynamics As Revealed by Field Cycling ¹H NMR Relaxometry. Macromolecules, 2012, 45, 2390-2401.	4.8	45
69	Mean Square Displacement and Reorientational Correlation Function in Entangled Polymer Melts Revealed by Field Cycling ¹H and ²H NMR Relaxometry. Macromolecules, 2012, 45, 6516-6526.	4.8	54
70	Protracted Crossover to Reptation Dynamics: A Field Cycling ¹H NMR Study Including Extremely Low Frequencies. Macromolecules, 2012, 45, 1408-1416.	4.8	45
71	Intermolecular relaxation in glycerol as revealed by field cycling 1H NMR relaxometry dilution experiments. Journal of Chemical Physics, 2012, 136, 034508.	3.0	65
72	1H NMR relaxation in glycerol solutions of nitroxide radicals: Effects of translational and rotational dynamics. Journal of Chemical Physics, 2012, 136, 114504.	3.0	15

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73	Nuclear magnetic resonance relaxometry as a method of measuring translational diffusion coefficients in liquids. Physical Review E, 2012, 85, 020201.	2.1	76
74	1H relaxation dispersion in solutions of nitroxide radicals: Effects of hyperfine interactions with 14N and 15N nuclei. Journal of Chemical Physics, 2012, 137, 044512.	3.0	16
75	Crystal structure and characterization of a novel ferroelastic ionic crystal: 1-Aminopyridinium iodide (C5H7N2)+Iâ^'. Chemical Physics Letters, 2012, 537, 38-47.	2.6	7
76	Field-cycling NMR relaxometry of viscous liquids and polymers. Progress in Nuclear Magnetic Resonance Spectroscopy, 2012, 63, 33-64.	7.5	146
77	ESR Studies of Paramagnetic Centers in Pharmaceutical Materials - Cefaclor and Clarithromycin as an Example. Acta Physica Polonica A, 2012, 121, 514-517.	0.5	11
78	NMR Relaxation and ESR Lineshape of Anisotropically Rotating Paramagnetic Molecules. Acta Physica Polonica A, 2012, 121, 527-532.	0.5	0
79	Polymer Dynamics of Polybutadiene in Nanoscopic Confinement As Revealed by Field Cycling ¹H NMR. Macromolecules, 2011, 44, 4017-4021.	4.8	38
80	Translational and Rotational Diffusion of Glycerol by Means of Field Cycling¹H NMR Relaxometry. Journal of Physical Chemistry B, 2011, 115, 951-957.	2.6	75
81	Quadrupole relaxation enhancementâ€"application to molecular crystals. Solid State Nuclear Magnetic Resonance, 2011, 40, 114-120.	2.3	44
82	Thermodynamic properties and molecular motions in ferroelectric (C3N2H5)5Sb2Br11. Chemical Physics, 2011, 380, 86-91.	1.9	6
83	Nuclear quadrupole resonance lineshape analysis for different motional models: Stochastic Liouville approach. Journal of Chemical Physics, 2011, 135, 224511.	3.0	4
84	Joint analysis of ESR lineshapes and 1H NMRD profiles of DOTA-Gd derivatives by means of the slow motion theory. Journal of Chemical Physics, 2011, 134, 024508.	3.0	30
85	Complex Nuclear Relaxation Processes in Guanidinium Compounds [C(NH2)3]3Sb2X9 (XÂ=ÂBr, Cl): Effects of Quadrupolar Interactions. Applied Magnetic Resonance, 2010, 39, 233-249.	1.2	13
86	Dynamics of Î±-Tocopherol Acetate: Proton Relaxation Studies Supported by Molecular Dynamics Simulations. Applied Magnetic Resonance, 2010, 39, 273-283.	1.2	2
87	Generalization of the Coleâ€"Davidson and Kohlrausch functions to describe the primary response of glass-forming systems. Journal of Physics Condensed Matter, 2010, 22, 365101.	1.8	22
88	Comparative Studies of the Dynamics in Viscous Liquids by Means of Dielectric Spectroscopy and Field Cycling NMR. Journal of Physical Chemistry A, 2010, 114, 7847-7855.	2.5	49
89	Fluorine dynamics in BaF2 crystal lattice as an example of complex motion in a simple system. Solid State Nuclear Magnetic Resonance, 2009, 35, 187-193.	2.3	6
90	Field cycling methods as a tool for dynamics investigations in solid state systems: Recent theoretical progress. Solid State Nuclear Magnetic Resonance, 2009, 35, 152-163.	2.3	24

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91	Structural characterization, thermal, dielectric, vibrational properties and molecular motions in. Journal of Solid State Chemistry, 2009, 182, 2949-2960.	2.9	28
92	General treatment of paramagnetic relaxation enhancement associated with translational diffusion. Journal of Chemical Physics, 2009, 130, 174104.	3.0	38
93	Prospectives and Limitations of Nqr Signal Enhancement by Polarisation Transfer. NATO Science for Peace and Security Series B: Physics and Biophysics, 2009, , 81-93.	0.3	1
94	Transport properties of CsHSO4 investigated by impedance spectroscopy and nuclear magnetic resonance. Ionics, 2008, 14, 223-226.	2.4	12
95	Extensive NMRD studies of Ni(II) salt solutions in water and waterâ€“glycerol mixtures. Journal of Magnetic Resonance, 2008, 195, 103-111.	2.1	26
96	Fluorine dynamics in LaF3-type fast ionic conductors â€” Combined results of NMR and conductivity techniques. Solid State Ionics, 2008, 179, 2350-2357.	2.7	21
97	Comparison of different methods for calculating the paramagnetic relaxation enhancement of nuclear spins as a function of the magnetic field. Journal of Chemical Physics, 2008, 128, 052315.	3.0	95
98	Nuclear quadrupole resonance (NQR) enhancement by polarization transfer and its limitation due to relaxation. Journal Physics D: Applied Physics, 2007, 40, 7555-7559.	2.8	4
99	Simultaneous effects of relaxation and polarization transfer in LaF3-type crystals as sources of dynamic information. Solid State Nuclear Magnetic Resonance, 2007, 31, 141-152.	2.3	18
100	Field Dependent Electron and Quadrupole Spin Relaxation: A Unified Treatment. Acta Physica Polonica A, 2007, 111, 215-238.	0.5	3
101	Field-dependent nuclear relaxation of spins 1/2 induced by dipoleâ€“dipole couplings to quadrupole spins: LaF3 crystals as an example. Journal of Magnetic Resonance, 2006, 179, 250-262.	2.1	26
102	Dynamics of fluorine ions in LaF3-type crystals investigated by NMR lineshape analysis. Journal of Physics Condensed Matter, 2006, 18, 1725-1741.	1.8	10
103	Evolution of solid state systems containing mutually coupled dipolar and quadrupole spins: Perturbation treatment. Solid State Nuclear Magnetic Resonance, 2005, 28, 180-192.	2.3	18
104	Nuclear spin relaxation study of aqueous raffinose solution in the presence of a gadolinium contrast agent. Magnetic Resonance in Chemistry, 2005, 43, 235-239.	1.9	1
105	On the problem of field-gradient NMR measurements of intracrystalline diffusion in small crystallitesâ€”Water in NaA zeolites as an example. Solid State Nuclear Magnetic Resonance, 2005, 28, 244-249.	2.3	8
106	Analysis of1Hâ€“14N polarization transfer experiments in molecular crystals. Journal of Physics Condensed Matter, 2005, 17, 519-533.	1.8	29
107	NMR RELAXATION IN SOLUTION OF PARAMAGNETIC COMPLEXES: RECENT THEORETICAL PROGRESS FOR Sâ‰¥1. Advances in Inorganic Chemistry, 2005, 57, 41-104.	1.0	112
108	Nuclear and electron spin relaxation in paramagnetic complexes in solution: Effects of the quantum nature of molecular vibrations. Journal of Chemical Physics, 2004, 121, 2215-2227.	3.0	27

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109	Internal dynamics of hydroxymethyl rotation from CH2 cross-correlated dipolar relaxation in methyl-Î²-d-glucopyranoside. Journal of Magnetic Resonance, 2004, 167, 273-281.	2.1	7
110	13C NMR Line Shapes in the Study of Dynamics of Perdeuterated Methyl Groups. Journal of Physical Chemistry A, 2004, 108, 9018-9025.	2.5	6
111	Field-dependent proton relaxation in aqueous solutions of some manganese(II) complexes: a new interpretation. Journal of Biological Inorganic Chemistry, 2003, 8, 512-518.	2.6	24
112	Nuclear spin relaxation in systems of magnetic spheres. Physica B: Condensed Matter, 2003, 328, 302-311.	2.7	0
113	Nuclear spin relaxation in paramagnetic systems (Sâ©¾1) under fast rotation conditions. Journal of Magnetic Resonance, 2003, 162, 229-240.	2.1	32
114	Nuclear spin relaxation in solution of paramagnetic complexes with large transient zero-field splitting. Molecular Physics, 2003, 101, 2861-2874.	1.7	27
115	Nuclear spin relaxation in ligands outside of the first coordination sphere in a gadolinium (III) complex:â€,â€,Effects of intermolecular forces. Journal of Chemical Physics, 2002, 117, 1194-1200.	3.0	15
116	Vibrational motions and nuclear spin relaxation in paramagnetic complexes: Hexaaquonickel(II) as an example. Journal of Chemical Physics, 2002, 116, 4079-4086.	3.0	20
117	13C NMR Lineshapes for the 13C2H2Hâ€² Isotopomeric Spin Grouping. ChemPhysChem, 2002, 3, 933-938.	2.1	7
118	Nuclear spin relaxation in paramagnetic systems with zero-field splitting and arbitrary electron spinElectronic Supplementary Information available. See http://www.rsc.org/suppdata/cp/b1/b106659p/. Physical Chemistry Chemical Physics, 2001, 3, 4907-4917.	2.8	79
119	Analysis of the shape of FID signal and NMR spinning sidebands for the Couette flow. Physica B: Condensed Matter, 2001, 301, 349-358.	2.7	0
120	Outer-sphere nuclear spin relaxation in paramagnetic systems: a low-field theory. Molecular Physics, 2001, 99, 1435-1445.	1.7	29
121	NMR relaxation spectroscopy: Interference effects. Applied Magnetic Resonance, 1999, 17, 367-374.	1.2	4
122	Influence of Sample Rotation on the Shape of the Free Induction Decay. Acta Physica Polonica A, 1993, 84, 321-325.	0.5	1
123	Chapter 2. Essentials of the Theory of Spin Relaxation as Needed for Field-cycling NMR. New Developments in NMR, 0, , 42-66.	0.1	0